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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,730	12/16/2003	Moo Ycol Park	8734.049 C1	3685
30827	7590	06/12/2007		
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			EXAMINER CANNING, ANTHONY J	
			ART UNIT	PAPER NUMBER
			2879	
			MAIL DATE	DELIVERY MODE
			06/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/735,730	PARK ET AL.	
	Examiner	Art Unit	
	Anthony J. Canning	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/6/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement of Amendment

The amendment of the instant application was entered on 28 September 2006.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Majima (U.S. 5,724,110).

As to claim 1, Majima discloses a method for fabricating a liquid crystal display panel, including: forming a UV Sealant (see Fig. 3, item 15; column 6, lines 1-19 and lines 56-60) on either one of first and second substrates (see Fig. 3, item 1'; column 6, lines 56-60; photocurable means cured using light, the examiner interprets this to include light in the ultraviolet wavelength); forming a liquid crystal layer (see Fig. 3, item 15; column 6, lines 1-19 and lines 56-60) between the first and second substrates (see Fig. 3, items 1 and 1'; column 6, lines 56-60); attaching the first and second substrates (see Fig. 4; column 6, lines 56-60); hardening the UV sealant other than the UV sealant on the regions where the UV sealant and at least one scribing line are crossed (see Fig. 6, item 14; column 7, lines 1-11; see Fig. 7, items 3 and 5; column 7, lines 23-35; the photomask causes the sealant to migrate to the areas exposed to the UV radiation, therefore the region 5 is not cured) by irradiating a UV ray on the attached substrates

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(column 7, lines 12-15 metal halide lamps produce light in the ultraviolet wavelength range) with masking regions (see Fig. 6, item 14; column 7, lines 1-11) where the UV sealant and at least one scribing line are crossed (see Fig. 4, item 15; column 6, lines 56-60; the UV sealant is initially on the entire substrate); wherein the UV sealant on the regions where the UV sealant and at least one scribing line are crossed is not entirely cured (see Fig. 7, items 3 and 5; column 6, lines 1-19; the sealant migrates to only areas where light is irradiated upon the substrate; column 7, lines 23-35, there is not curable compound in the scribing regions, 5) and cutting the bonded substrates into a plurality of unit cells (column 7, lines 36-38), wherein forming the liquid crystal layer includes dropping a plurality of droplets of liquid crystal onto either one of the first and second substrates (see Fig. 3, item 15; column 6, lines 1-19 and 56-60; the entire liquid crystal material is made up of a plurality of droplets, just like a body of water is made up of a plurality of water droplets).

As to claim 2, Majima discloses the method of claim 1. Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking upper and lower side portions of the crossed regions between the UV sealant and the scribing line (see Fig. 6, item 14; column 7, lines 1-11; the mask covers the region of the scribing lines).

As to claim 4, Majima discloses the method of claim 1. Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking an active region (see Fig. 6, item 4, item 14; column 7, lines 1-11; the only areas that are irradiated are the areas where the sealant is to be formed, which is not the active region) in addition to masking upper and lower side portions of the crossed regions between the UV sealant and the scribing lines (see Fig. 7, items 3 and 5; column 7, lines 23-34; the mask will be on the right and left side

of the seal line to form the seal, the examiner interprets the left and right side of the seal line as above and below the seal line in the horizontal direction).

As to claims 3 and 5, Majima discloses the method of claims 1 and 4. Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking left and right side portions of the Crossed regions between the UV sealant and the scribing lines (see Fig. 6, item 14; column 7, lines 1-11; the mask covers the region of the scribing lines).

As to claim 6, Majima discloses the method of claim 1. Majima further discloses that the UV sealant surrounds the plurality of the unit cells (see Fig. 7, item 3; column 7, lines 22-35).

As to claim 7, Majima discloses the method of claim 6. Majima further discloses masking an active region inside the main sealant (see Fig. 6, item 16; column 7, lines 1-11).

As to claim 8, Majima further discloses the method of claim 6. Majima further discloses that the UV sealant (see Fig. 7, item 3; column 7, lines 22-35) forms at an outside of the main sealant (see Fig. 7, item 4; column 7, lines 22-35).

As to claim 9, Majima disclose the method of claim 6, wherein the UV sealant includes one of monomer and oligomer each having both ends coupled to an acrylic group (column 5, lines 40-44).

As to claim 10, Majima discloses, the method of claim 6. Majima further discloses that the main UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

As to claim 11, Majima disclose the method of claim 1. Majima further discloses that the UV

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sealant includes one of monomer and oligomer each having both ends coupled to an acrylic group (column 5, lines 40-44).

As to claim 12, Majima discloses the method of claim 1. Majima further discloses that the main UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

As to claim 13, Majima discloses the method of claim 1. Majima further discloses heating the UV ray irradiated substrates with masking crossed regions between the UV sealant and the scribing lines (see Fig. 6, item 14; column 6, lines 1-19; the irradiation of the substrate will also heat the substrate), wherein the UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

As to claim 14, Majima discloses the method of claim 1. Majima further discloses that the scribing line is formed on the bonded substrates (see Fig. 7, items 5 and 6; column 7, lines 23-26).

As to claim 15, Majima discloses the method of claim 1. Majima further discloses that the cutting the bonded substrates into a plurality of unit cells is performed by scribing and breaking simultaneously (column 7, lines 36-38, dicing will simultaneously scribe and break the substrates).

As to claim 16, Majima discloses the method of claim 1. Majima further discloses including forming at least one column spacer on the first substrate (see Fig. 6, item 17; column 6, lines 1-19; the column spacer is formed from the sealing material and is joined to both

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substrates).

As to claim 18, Majima disclose the method of claim 1. Majima further discloses that the UV sealant is formed on the first substrate (see Fig. 5, item 15; column 6, lines 61-67; the UV sealant is formed to be injected between the two substrates), and the plurality of droplets of liquid crystal is dropped onto the second substrate (see Fig. 5, item 15; column 6, lines 56-67; the liquid crystal is dropped between the two substrates and is therefore formed on the second substrate).

As to claim 19, Majima disclose the method of claim 1. Majima further discloses that forming the liquid crystal layer includes dropping at least one droplet of liquid crystal onto each of the plurality of unit cells (see Fig. 10, item 10; column 8, lines 55-63; the injection hole in each cell allows for droplets to be dropped into each individual cell).

As to claim 20, Majima discloses the method of claim 1. Majima further discloses that the hardening includes hardening all the UV sealant other than the UV sealant on the regions where the UV sealant and at least one scribing line are crossed (see Fig. 6, item 14; column 7, lines 1-11; see Fig. 7, items 3 and 5; column 7, lines 23-35; the photomask causes the sealant to migrate to the areas exposed to the UV radiation, therefore the region 5 is not cured).

Response to Arguments

Regarding the applicant's argument "forming a UV sealant on either one of the first or second substrates" and "forming a liquid crystal layer between the first and second substrates" limits the invention to the UV sealant and the liquid crystal layer to being formed separately, the examiner respectfully disagrees. In fact, there is no recitation within the claims as to the layers

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being formed separately. The examiner interprets that the liquid crystal layer is formed between the first and second substrates means that the liquid crystal layer can be formed on one substrate before the second substrate is assembled thereupon, which means that the UV curable material and the liquid crystal material and be a mixture which is dropped onto a substrate.

Final Rejection

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Canning whose telephone number is (571)-272-2486. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh D. Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Canning

Patent Examiner

Art Unit 2879

5 June 2007 *an*

K. Guharay
KARABI GUHARAY
PRIMARY EXAMINER